



SCIENCE SHEETG 4

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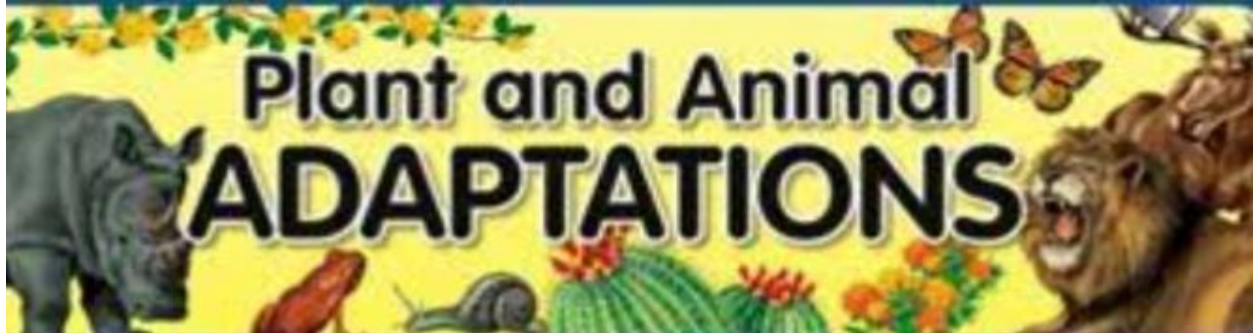
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Adaptation.

The adaptation :

It is a change that happens to animals and helps them survive



ways to adapt

These are the characteristics that help living things to survive

Example:

polar bear :

it have thick white fur that helps it feel warm and hide among the snow to hunt



brown bear :

It has brown fur to help it hide in the trees



fennec fox :

A young fox that lives in the desert and has big ears



It has golden fur that helps him hide in the desert



Lizards :

It has colored scales to hide among the colored rocks in the desert



Exercise

Q1 : define

Adaptation :

.....

Q2 Choose :

1. The animals adapt to (travel _ survive _ eat)
2. The polar bear hasfur . (black _ brown _ white)
3. The brown bear hide between..... (snow _ trees _ river)
4. The polar bear hide in the (trees _ snow _ desert)
5. The fennec fox hasfur (black _ white _ yellow)
6. The fennec fox has ears (big _ small _ short)

7. The lizards lives in(rivers _
snow_desert)

8. The fennec fox live in ...(desert _
snow _ river)

Q3 complete :

(lizard _ yellow _ trees_snow _colored
rocks_ adaptation)

1. The fennec fox has fur
2. Thehas colored scales
3. The bolar bear live in.....
4.it's the chages that happen to
animal and heps them to survive .
5. The brown bear hide between
6. The lizard hide between

Bat

Bats adapt to the environment

1. It sleeps upturn with its head down



2. It has a body structure that allows it to fly like a bird



3. It feeds on insects



4. It help Plants and flowers like butterflies



5. Bats are night animals and they can fly by echolocation



Complete :

**Night _ olants _ body structure _ insect _ upturn _
echolocation**

1. Bats have help it to fly
2. Bats feed on
3. Bats help..... as butterflues
4. Bats sleep
5. The bats areanimals
6. Bats can fly by

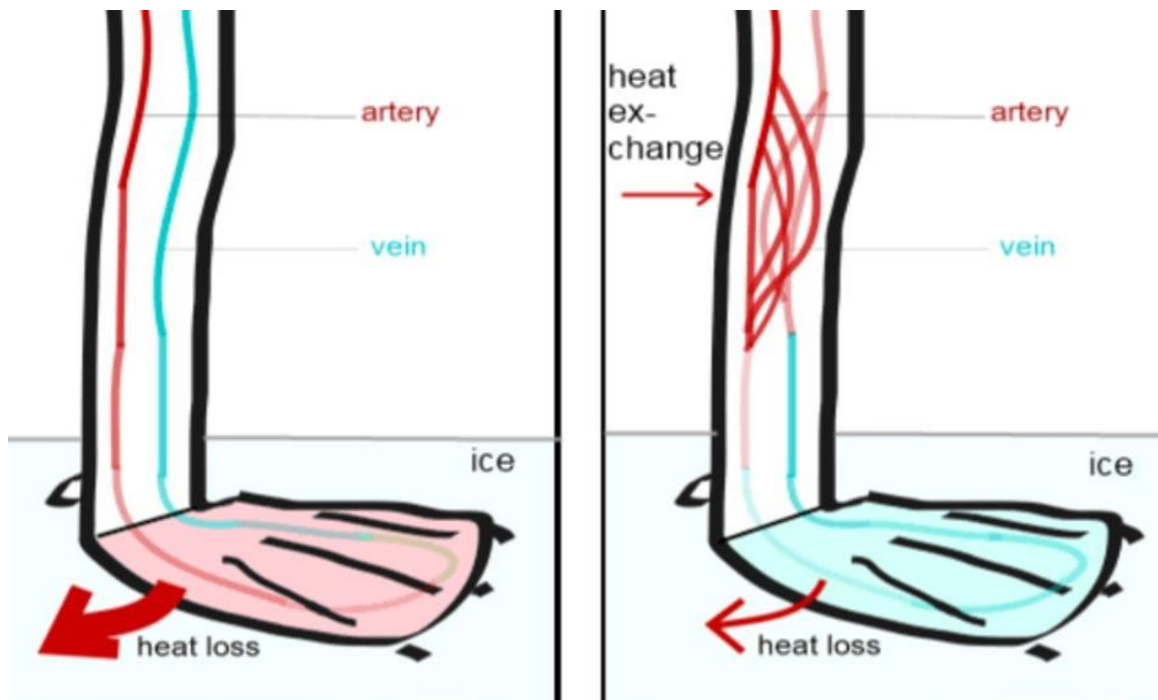
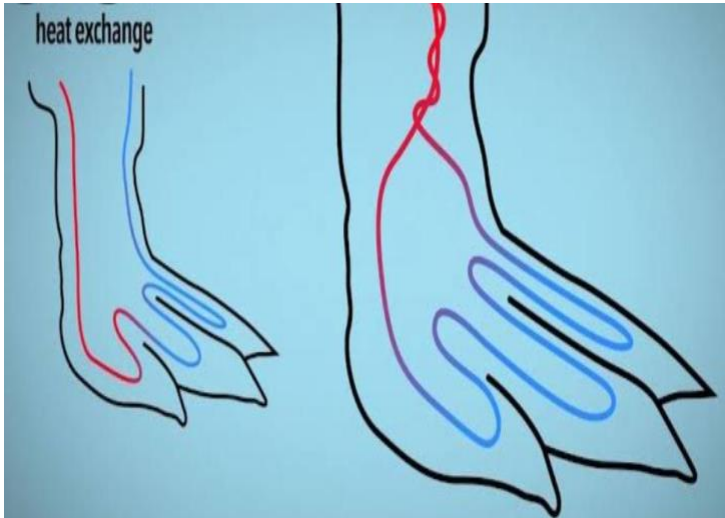
Penguins

Adaptation of the feet of penguins to the arctic climate

Penguins' feet stay warm due to the movement of blood inside the blood vessels



Where the blood vessels that carry warm blood from the warm parts wrap around the blood vessels that carry cold blood and work to warm them



tiger chameleon

1. Its body is covered with colored scales to hide among trees and colorful flowers and to hunt



2. It has a V-shaped foot... to stick to tree branches and hunt



3. It has a long tail... to catch things



4. It has two eyes and can move them in different directions to be able to escape from enemies or hunt



5. When it feel danger inflates its body with air and opens its mouth to appear larger and frighten the enemies



Exercise

Choose :

.the penguin lives in

(hot climate _ arctic climate_ rainy climate)

.the help penguin to make its feet warm

(blood _ skin _ fur)

.the movement of blood can the penguin's feet (cold _ tall_ warm)

.chameleon have.....scales

(big _ colored _ small)

*.chameleon have leg in
shape (A _ V _ M)*

*_.the chameleon eyes can move in....
(diferrent _ one _ two) direction .*

*.chameleon have tail to
(Catch _ made _ eat)*

Give reason :

1. Chameleon have tail

.....

2. Chameleon inflates its body

.....

**3. Chameleon have two eyes can
move in many direction**

.....

...

4. Chameleon body coverd with scales

5. Chameleon have V shape legs

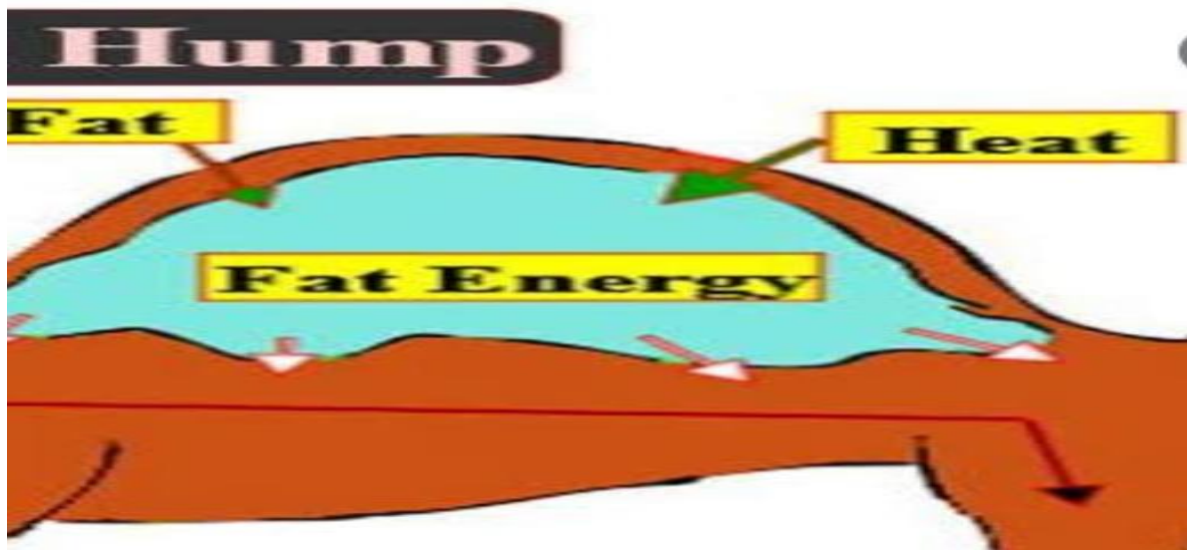
6. The bats can fly.

Adaptation in camel

It has a hump ==== to storage the water and food



The hump with large amount of fats === to give it energy



Camel pad thick and flat === to prevent diving in sand and move freely



Camel's leg has thick hair === to avoid the high temperature of sand



It has transparent eyelid to eject the sand during winds



H.W

G.R : the camel has transparent eyelid ?

.....

.

G.R : the camel's leg has thick hair ?

.....

.

G.R : camel's pad thick and flat ?

.....

**G.R : the hump of camel has large
amount of fats ?**

.....

G.R : the camels have a hump ?

.....

Bull shark


It has unique feature ..

***Their body adapt to live in fresh water
and salt water***



It can sneak up on its preys by color contrast







<u>Polar fox</u>	<u>Fennec fox</u>
<i>Live in tundra desert</i>	<i>Live in dry dessert</i>
	
<i>White thick fur</i>	<i>Golden or brown fur</i>
<i>Short ears and legs to feel warm</i>	<i>Depend on panting to keep the body temperature</i> <i>Long ears to cool their bodies</i>
<i>Feed on all types of insects , fruits and food remains from other predators</i>	<i>Feed on all types of insects , fruits and food remains from other predators</i>

H.W

Complete:

1. *the bolar fox live in*
2. *The fennec fox hasears*
3. *The bull shark can sneak to its preys
by*
4. *The bolar fox has;.....fur*
5. *The fennec fox depend on..... to
keep the body temperature*
6. *The bolar and fennec fox feed on
.....;.....;
.....*
7. *The bolar fox has..... ears
and.....to feel warm*
8. *The fennec fox hasear to cool
its body*

Types of adaptation

<u>Structural</u>	<u>Behavioural</u>
<i>Modification in the structure of its body</i>	<i>modification in the behaviour of living organisms</i>
<i>Ex) camel pad</i> <i>Ex) horse hoof</i>  	<i>ex)activity of bats at night</i> <i>ex) birds migration at certain time of year</i>  

<u>Animals</u>	<u>Type of adaptation</u>
<i>Penguin feet</i>	<i>Structural</i>
<i>Camel pad</i>	<i>Structural</i>
<i>Bat wing</i>	<i>Structural</i>
<i>Foxs ears and legs</i>	<i>Structural</i>
<i>Chameleon tail , eye</i>	<i>Structural</i>
<i>Chameleon colors</i>	<i>Behavioural</i>
<i>Bull shark</i>	<i>Behavioural</i>
<i>Bird migration</i>	<i>Behavioural</i>
<i>Bat activity</i>	<i>Behavioural</i>

H.w

Define:

Structural adaptation

.....

....

Behavioural adaptation

.....

.....

Give example on :

The structural adaptation as

..... ;

Behavioural adaptation as

..... ;

Fill the table by the tybes of adaptation :


<u>Animals</u>	<u>Type of adaptation</u>
<i>Penguin feet</i>
<i>Camel pad</i>
<i>Bat wing</i>
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<i>Bat activity</i>

Adaptation in plants

Plants grow in the places with good ventilation and good sun

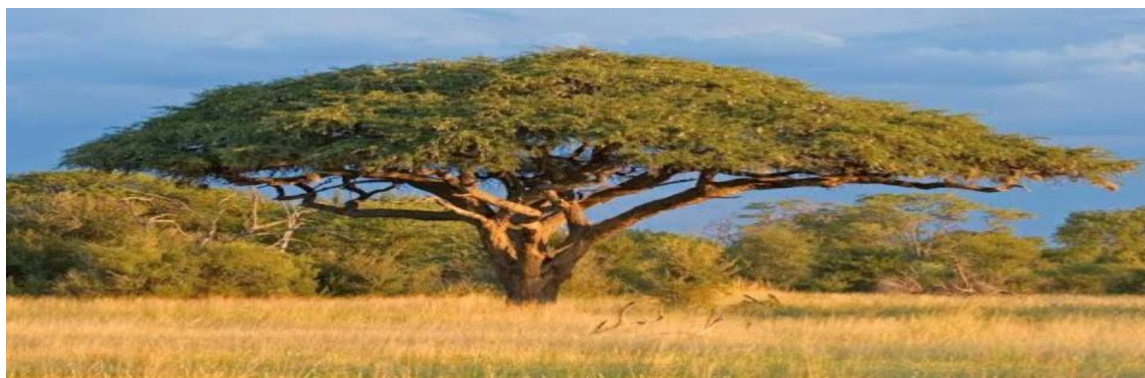
Even under the snow it can adapt to live like the animals

EX \ Savannah forest

Location	South africa 
climate	Medium temperature
Problems	Leakage of water (drought season)

The plants cannot adapt with this drought except Acacia

Adaptation of Acacia



<u>Adaptation part</u>	<u>How it adapt</u>
<u>Small leaves in top of tree</u>	<u>It acts as umbrella and absorb light for food</u>
<u>peg roots its depth 35m under earth surface</u>	<u>To fix it and reach water</u>
<u>Big height and thorns around leaves</u>	<u>To prevent animals to reach it except giraffe</u>
<u>Leaves secrete poison</u>	<u>To prevent animals feeding from it</u>

Kapok tree

location	It grow in amazon forests brazil
climate	rainy
height	70 m the longest between other trees



<u>Adaptation part</u>	<u>How it adapt</u>
Leaves like a net looks palm	It allow wind pass through the leaves
Flower odour	To attract bats
Strong roots grow up right	To support the tree and make it stable in mud and sand soil



HW

Complete :

1. ***Plants grow in the places with
..... ,***
2. ***The location of savannah forest
.....***
3. ***The climate of savannah forest
.....***
4. ***The plants cannot adapt with the
savannah drought except***
5. ***The plants can adapt to live even
under***
6. ***Acacia can live in***

Give reason :

- **The small leaves in the top of acacia tree ?**

.....

- **The roots of acacai grow under the ground ?**

.....

- **The acacia tree has thorns around the leaves ?**

.....

- **The leaves of acacia tree secrete poison?**

.....

- **The animals cannot feed on the acacia leaves ?**

.....

Answer the questions :

1. **What is the location of kapok tree ?**

.....

2. **What is the climate where the kapok can live ?**

.....

3. **What is The height of kapok tree ?**

.....

4. **G.R : the leaves of kapok look like a palm ?**

.....

5. **G.R : the flower odour of kapok tree ?**

.....

6. G.R : the roots of kapok grow up right ?

.....

7. G.R : The wind can pass through the leaves ?

.....

8. G.R : the kapok tree can attract bats ?

.....

9. G.R :The root of kapok tree stable in the mud ?

.....

10. Why the kapok tree the longest between the other ?

.....

General exercise

Q1 : define

Adaptation :

.....

Structural adaptation

.....

Behavioural adaptation

.....

Q2 Choose :

9. The animals adapt to (travel _
survive _ eat)
10. The polar bear hasfur . (black _
brown _ white)
11. The brown bear hide between..... (
snow _ trees _ river)
12. The polar bear hide in the (trees _
snow _ desert)
13. The fennec fox hasfur (black _
white _ yellow)
14. *the penguin lives in*
(hot climate _ arctic climate_ rainy
climate)
15. *the help penguin to make its*
feet warm
(blood _ skin _ fur)

- 16..the movement of blood can
the penguin's feet (cold _ tall_
warm)**
- 17..chameleon have.....scales
(big _ colored _ small)**
- 18..chameleon have leg in
shape (A _ V _ M)**
- 19..the chameleon eyes can move in....
(diferrent _ one _ two) direction .**
- 20..chameleon have tail to
(Catch _ made _ eat)**
- 21.The fennec fox has ears (big _
small _ short)**
- 22.The lizards lives in(rivers _
snow _ desert)**
- 23.The fennec fox live in ...(desert _
snow _ river)**

Q3 complete :

7. The fennec fox has fur
8. Thehas colored scales
9. The polar bear live in.....
10.it's the changes that happen to animal and helps them to survive .
11. The brown bear hide between
12. The lizard hide between
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under*
18. *Acacia can live in*

19. Bats have help it to fly
20. Bats feed on
21. Bats help..... as butterflies
22. Bats sleep
23. The bats areanimals
24. Bats can fly by
25. *the bolar fox live in*
26. *The fennec fox hasears*
27. *The bull shark can sneak to its preys
by*
28. *The bolar fox has;.....fur*
29. *The fennec fox depend on..... to
keep the body temperature*
30. *The bolar and fennec fox feed on
.....;.....;*
31. *The bolar fox has..... ears
and.....to feel warm*
32. *The fennec fox hasear to cool its
body*

Give example on :

The structural adaptation as

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Answer the questions :

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What is The height of kapok tree ?

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